



UNIVERSITI
TEKNOLOGI
PETRONAS

STUDENT INDUSTRIAL INTERNSHIP PROGRAMME LOGBOOK WEEK 1 & 2

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Programme: Bachelor of Technology in Information Technology

Place of Training: Universiti Teknologi PETRONAS (UTP) / Murdoch University, Australia

Period of Training: 6th May 2019 – 6th December 2019

Project Title: Project Neuromender (A Home Computer-Based Stroke Rehabilitation System).

LOG BOOK**WEEK NO: 1-2**

WEEK NO	DATE	BRIEF DESCRIPTION OF DAILY ACTIVITIES
1	02.09.2019	<ul style="list-style-type: none">• Synchronized player movement in the scene• Instantiate player at the spawning point
	03.09.2019	<ul style="list-style-type: none">• Fix the controller on the scene
	04.09.2019	<ul style="list-style-type: none">• Showing player name above them in the scene
	05.09.2019	<ul style="list-style-type: none">• Weekly presentation• Brief about the new task
	06.09.2019	<ul style="list-style-type: none">• Literature review• Learn sketchup software
2	09.09.2019	<ul style="list-style-type: none">• Research on making avatar in multiplayer• Make avatar interact with object
	10.09.2019	<ul style="list-style-type: none">• Instantiate avatar in multiplayer platform
	11.09.2019	<ul style="list-style-type: none">• Creating interactable script
	12.09.2019	<ul style="list-style-type: none">• Add the rotation and position for player
	13.09.2019	<ul style="list-style-type: none">• Instantiate body and hand of the player

Logbook Weekly Evaluation by HOST COMPANY SUPERVISOR					
Instruction to Host Company Supervisor Please refer to the student's to assess his/her performance. Please award the scores based on the range below:					
Student's Score	Beginning (<2.0)	Developing (2.0 to <3.25)	Accomplished (Rare) (3.25 to <4.0)	Exemplary (Exceptionally Rare) (4.0 to 5.0)	Score
Initiative & Creativity	Had little observable drive and did not have new ideas	Some observable drive and some new ideas	Mostly self-starter and sometimes sought new challenges and offered new ideas	Always a self-starter and consistently sought new challenge and offered new creative ideas	/5
Task Accomplishment & Commitment	Partially accomplished given task despite full supervision	Accomplished given task but with full supervision	Accomplished given task but with some supervision	Accomplished given task with very minimum supervision	/5
Attendance & Punctuality	Frequently absent and always late	Sometimes absent and sometimes late	Never absent and almost always on time	Never absent and always on time	/5
Attitude & Self Control	Unable to demonstrate positive attitude and hardly maintained self-control under pressure	Occasionally demonstrated positive attitude and occasionally maintained self-control under pressure	Sometimes demonstrated positive attitude and maintained self-control under pressure	Consistently demonstrated positive attitude and consistently maintained self-control under pressure	/5
Total Score					/20
Comments: 					
Host Company Supervisor's Signature & stamp: 					
Name & Designation: 					
Date: 					

(make copies if necessary)

DETAIL REPORT

WEEK NO: 1

Objective(s) of the activities :

- **Synchronized player movement in the scene**
- **Instantiate player at the spawning point**

Contents :

Monday (02.09.2019)

1. Instantiate player in the scene through network.
2. Result: Player able to instantiate over the network
Problem:
 - Movement of the player did not synchronize over the network
 - Once the player has been instantiated, the controller used to teleport, and grabbing cannot be used
3. Each player has their own photon id and name

DETAIL REPORT

WEEK NO: 1

Objective(s) of the activities :

- **Fix the controller on the scene**

Contents :

Tuesday (03.09.2019)

1. As start, we have code the controller to works with teleport and grabbing the object
2. However, as the player has been instantiated through network, the controller cannot be used but we can see it on the scene.
3. We have fix the controller but the new problem is that the controller is instantiated at our back

DETAIL REPORT

WEEK NO: 1

Objective(s) of the activities :

- **Showing player name above them in the scene**

Contents :

Wednesday (04.09.2019)

1. We have successfully get the player to enter their own name and show it to the console
2. The problem arised when we want to make the name appeared above the player and follow them when the game is running
3. We have able to instantiate the player name above the player however it still di not follow them during the game
4. We tried to add canvas to the player and adding some code but the result is the same

DETAIL REPORT

WEEK NO: 1

Objective(s) of the activities :

- **Weekly presentation**
- **Brief about the new task**

Contents :

Thursday (05.09.2019)

1. We have presented the update which are
 - i. Player has connected
 - ii. Able to create and join room
 - iii. Able to see each other in the game
2. Problem
 - i. The player can see the other in real time
 - ii. The writing and sending data seem to be delay which result in player cannot update the movement very often
3. We have been briefed about our new task (IKEA in VR)
 - i. Make a simulation on how to build an IKEA product in VR environment
 - ii. We need to create some 3D model to match with the product such as screw, and table
 - iii. We need to make this project works in multiplayer

DETAIL REPORT

WEEK NO: 1

Objective(s) of the activities :

- **Literature review**
- **Learn sketchup software**

Contents :

Friday (06.09.2019)

1. Make some research on how to make the VR simulation for tutorial to make things
2. Install Sketchup and register
3. Learn on how create an avatar and on how to works with controller
4. Create an avatar from Adobe Fuse and Mixamo

DETAIL REPORT

WEEK NO:2

Objective(s) of the activities :

- **Research on making avatar in multiplayer**
- **Make avatar interact with object**

Contents :

Monday (09.09.2019)

1. Create new thread in unity forum asking for other developer on hoe they have create their avatar in multiplayer
2. Result from unity forum, there are 3 option that we can use to make avatar multiplayer work with htc vive
 - i. By using camera rig
 - ii. Using player prefabs provided by steam vr
 - iii. Create own avatar with humanoid type
3. I have tried creating avatar by using camera rig and it is successful
4. Since we are using camera rig, we need to code something to make the player interact with the 3D object
5. Problem
 - i. The concept is not the same as we used 3D object provided by unity. As 3Dobject which has been import has mesh renderer
 - ii. Other than that, some function are not supported by the latest unity version such as `steamVR.controller.input`

DETAIL REPORT

WEEK NO: 2

Objective(s) of the activities :

- **Instantiate avatar in multiplayer platform**

Contents :

Tuesday (10.09.2019)

1. As we are creating multiplayer games, the other player must see each other on the scene
2. In the forum, other developer said that they are several ways to instantiate full body avatar inside the scene
3. The ways are,
 - i. Need to instantiate player over the network not by locally
 - ii. Instantiate the child of the player which are hands and head by using child network transform
 - iii. Implement a script to check either `NetworkIdentity.isLocalPayer`
If it is not local player, it need to disable everything which having to do with steamVR
 - iv. Need to enable the transformation of the controller and head over the network to make sure the data has been sent to server and update to other player
 - v. Need to have visual representation of the player hands and head
 - vi. Allowing the child transform script to handle the update of the location
4. Problem,
 - i. Network parent and child are UNet supported. However, unity has remove UNet networking from their application.
5. However, this can bring an idea on how to instantiate avatar for through photon networking

DETAIL REPORT

WEEK NO: 2

Objective(s) of the activities :

- **Creating interactable script**

Contents :

Wednesday (11.09.2019)

1. Creating hands, interactable and teleport script for the player to interact the object
2. Problem
 - i. There are a tutorial which shows how to make player used binding UI for VR controller
 - ii. However, by following this tutorial all the function for the controller has been rest which make me need to do it back
3. Hands and teleport has been adding to both controller right and left in camera rig to make surer it can be used

DETAIL REPORT

WEEK NO: 2

Objective(s) of the activities :

- **Add the rotation and position for player**

Contents :

Thursday (12.09.2019)

1. Adding the rotation and position for the player in the grabbing scene
2. This is because, in the last testing the data is not synchronized between the player in the scene.
3. Transfer all the script into the grabbing scene to test it on the network
4. Result
 - i. The player controller are not in front of the player compared to before at the back of the player
 - ii. Photon view need to be add to ensure data can be sent through the network
 - iii. Test with the 2 pc however, the other player did not spawn on the other pc

DETAIL REPORT

WEEK NO:2

Objective(s) of the activities :

- **Instantiate body and hand of the player**

Contents :

Friday (13.09.2019)

1. The problem which player did not spawn on the other pc has been solve by adding the photon view as a child of the camera inside the camera rig
2. With this solution, we can see that the player which we attach the sphere has instantiated inside the other pc
3. Problem
 - i. When we instantiate the player and the player are picking the cube, the other player did not see the controller from other player
4. This is where I try to implement the idea from UNet which they need to instantiate the player controller as a child of the player
5. Problem
 - i. The controller has been instantiated, however the position is too far away from the player
 - ii. Other than that, vr action manifest also cannot be loaded inside the unity which makes the controller cannot be seen
 - iii. Once all the project has been save, when trying to reopen it, Unity said that the project has crash and cannot be open